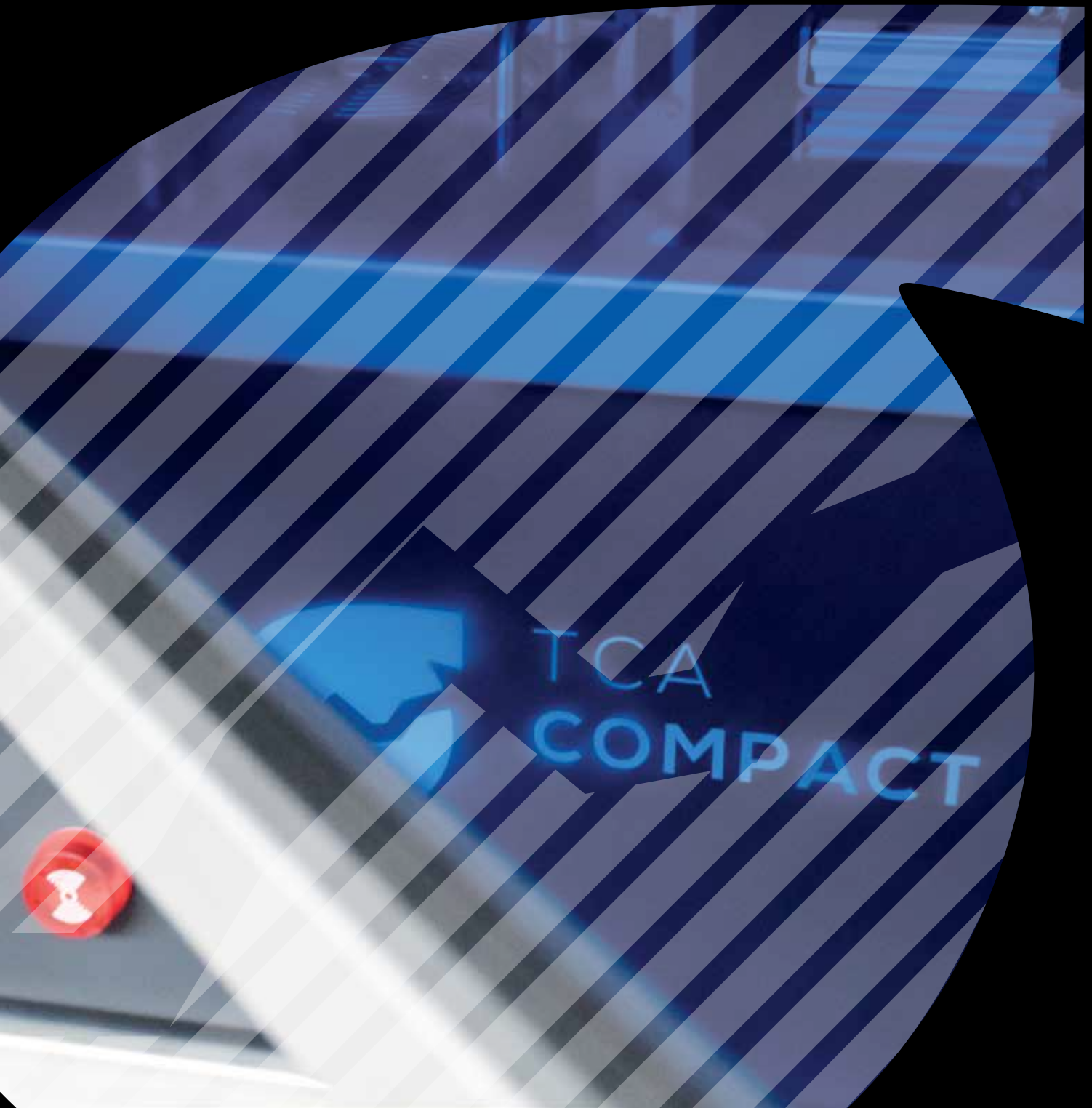


# *USER'S MANUAL*

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## *TurboCharger Analyser Compact*

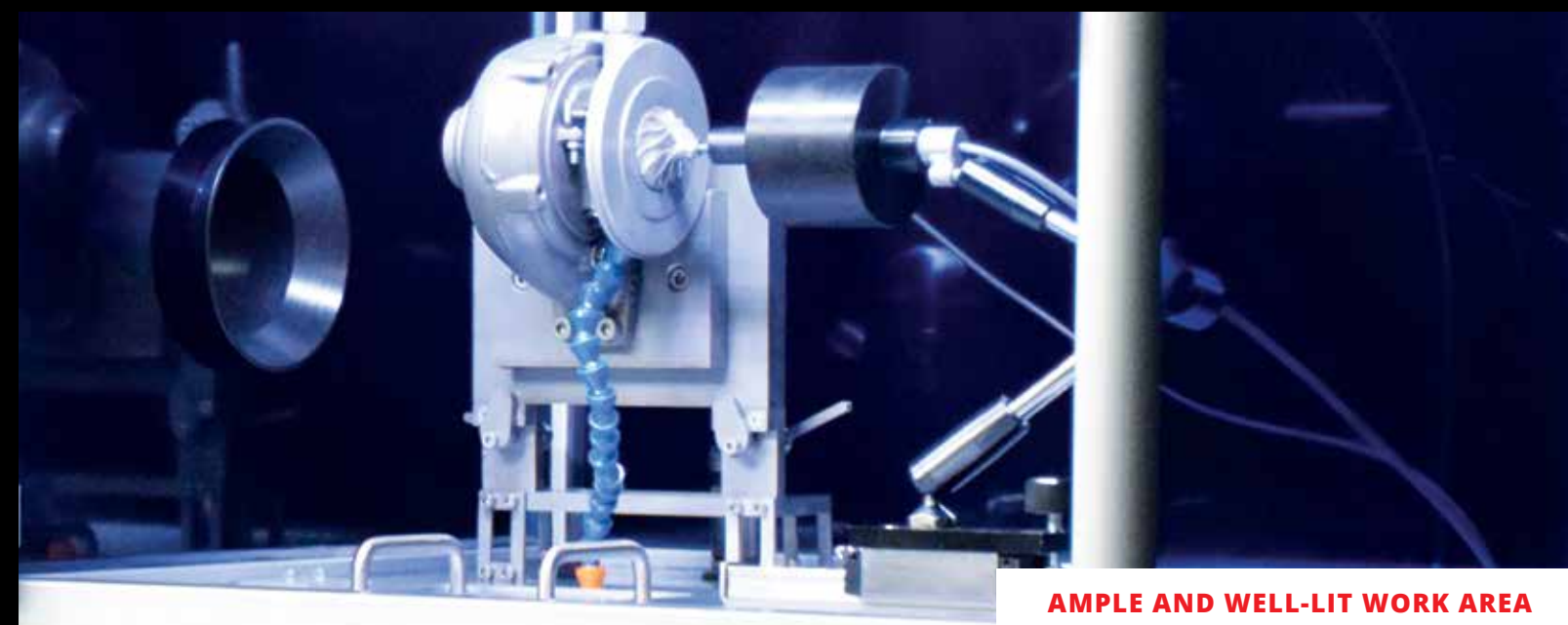




**USE OF THE ORIGINAL EXHAUST (TURBINE HOUSINGS) FOR BEST TEST SIMULATION**



**SIMPLE TO WORK WITH TO REDUCE THE TESTING TIME**



**AMPLE AND WELL-LIT WORK AREA**





# INDEX

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## INTRODUCTION

*TurboClinic's TCA Compact* is the **first bench top balancing turbochargers equipment in the world**. Like all *Turboclinic's* equipment, it benefits from **innovative** and **modern design**, **technological innovation** and **simplicity of operation**.

Created using the same **balancing principles as the TCA Pro v2**, the **TCA Compact analyses the balance of the turbochargers** and allows them to **work with standard values again**.

The **TCA Compact** is a **precise** and **reliable balancing equipment** with the **same data acquisition system and software(\*) as the TCA Pro v2**. It has the **most advanced software** on the market, **exclusive design** and it was **fully developed by our team**.

The **TCA Compact fulfills the essential needs of its users in a smaller and lighter format**.

(\*) It requires the use of a computer to run the equipment's software.





## **THIS BOX CONTAINS**

- \\ 1 TCA Compact
- \\ 7 Oil adaptors
- \\ 1 Magnet
- \\ 1 Base flange
- \\ 1 Air grinder
- \\ 1 USB cable
- \\ 1 Power supply cable
- \\ 1 Pen drive with the software (\*)

*(\*) It requires the use of a computer to run the equipment's software.*

**turboclinic**  
turboclinic.com | info@turboclinic.com





## CHARACTERISTICS

- \\ Single power ON/OFF button;
- \\ Ergonomic design for user comfort;
- \\ Ample and well-lit work area  
(*low consumption LED lighting*);
- \\ Intuitive graphical interface;
- \\ Test speeds over 300.000 RPM;
- \\ Accuracy of 0,005 G;
- \\ Simple to work with to reduce the testing time;
- \\ Use of the original exhaust (*turbine housings*) for best test simulation;
- \\ Oil temperature automatically controlled;
- \\ Oil tank: 7 liters;
- \\ Generate reports;
- \\ Ready to test the last generation turbochargers;
- \\ USB connection;
- \\ Compact size.





## **TECHNICAL REQUIREMENTS**

- \\ Compressed Air Network (*between 8 and 10 BAR*);
- \\ 300 Liters compressed air tank (*minimum*) linked directly to the machine by 1" hose (*maximum distance recommended - 2m*);
- \\ Power Supply 230V - 50Hz, 1500 WATTS.

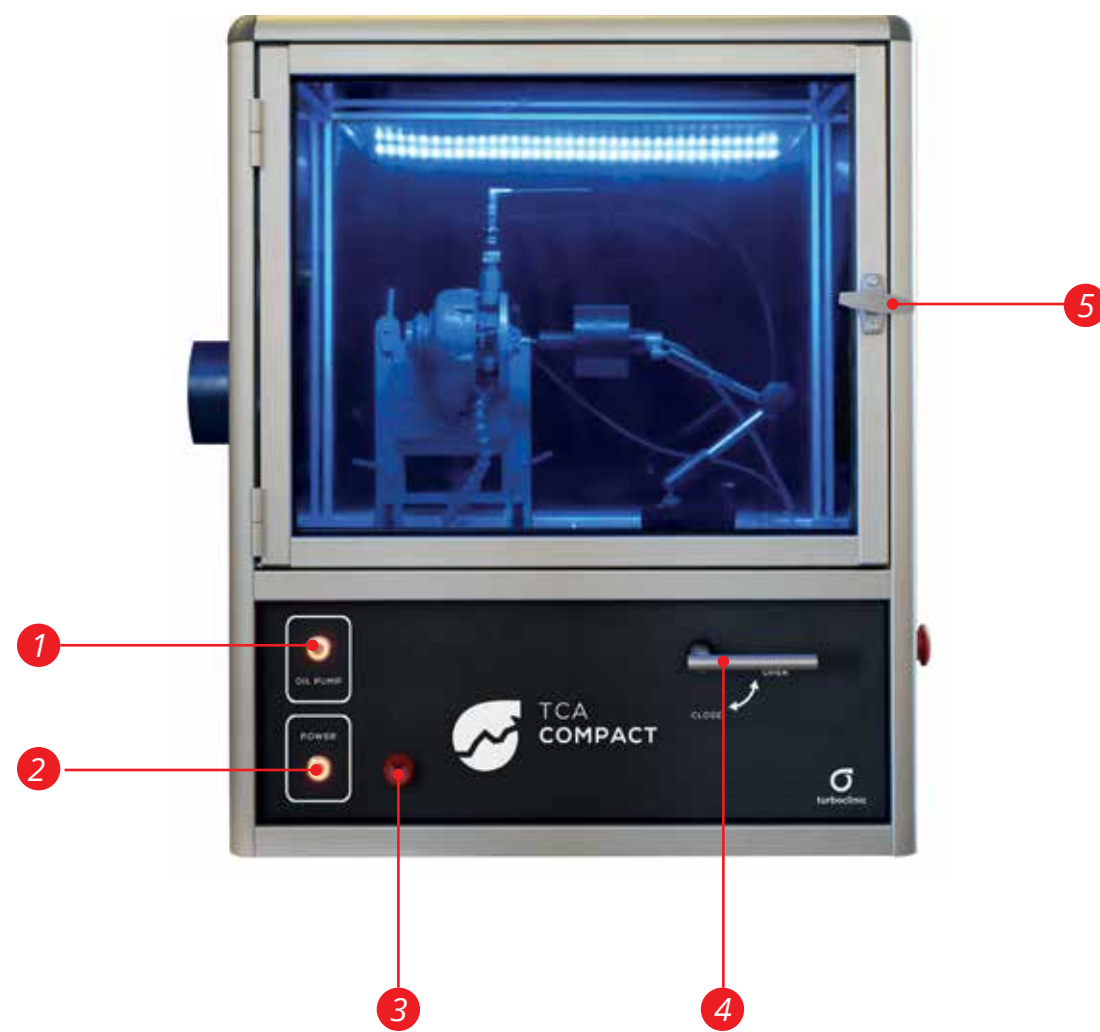
## **MAINTENANCE**

- \\ Pay attention to the oil conditions;
- \\ Replace the oil and the oil filter at least once a year.

## DIAGRAM

### *TCA Compact \ Front*

- 1\ Oil Pump Button
- 2\ ON/OFF Button
- 3\ Warning Light and Buzzer Alarm  
(if activated, there will be an informative pop-up on the screen)
- 4\ Air Control Valve
- 5\ Door Lock



### *TCA Compact \ Right Side*

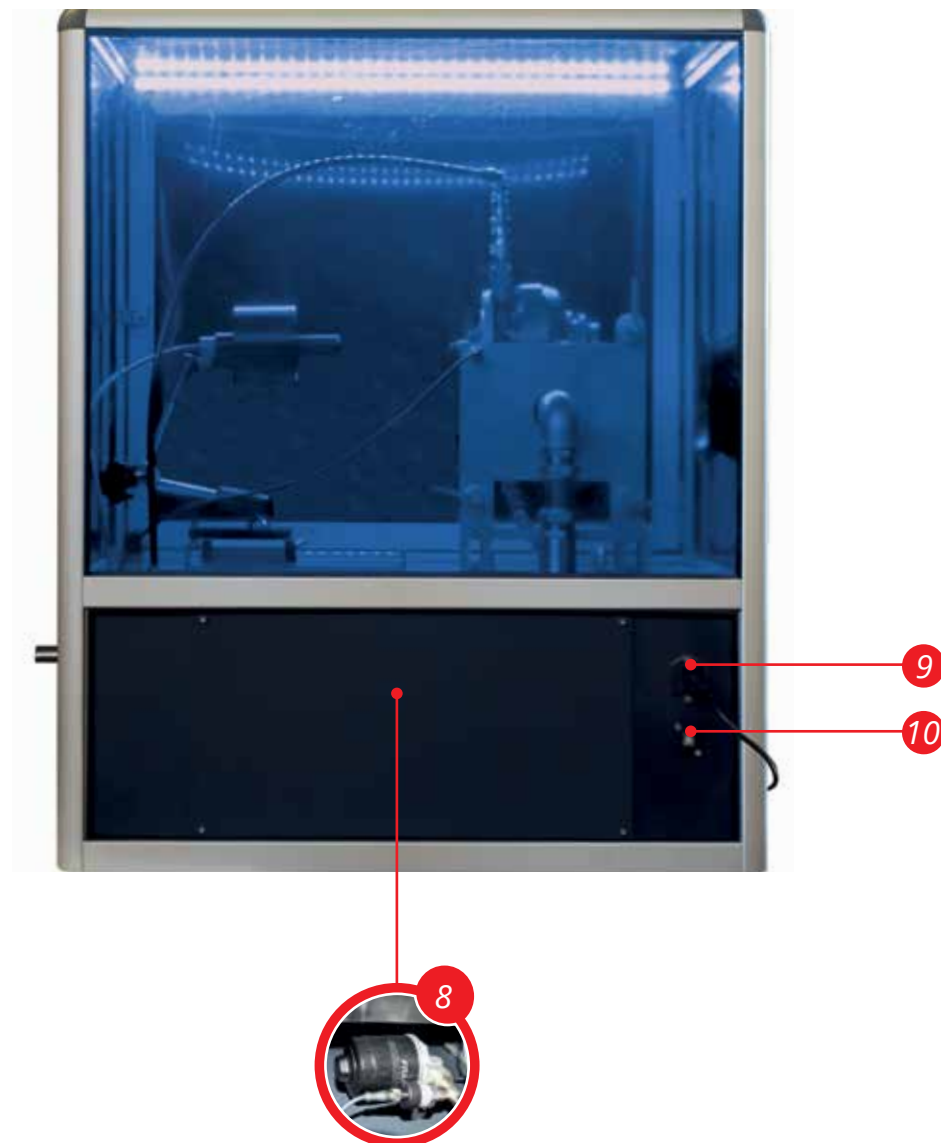
- 6\ Emergency Stop Button
- 7\ Air Inlet





## *TCA Compact \\ Back*

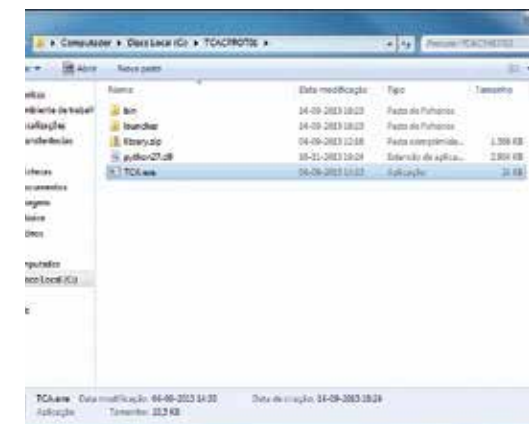
- 8\ Oil filter inside
- 9\ Plug to connect power supply cable to the 230V~50Hz
- 10\ Plug to USB connection



## **SOFTWARE RUN**



- 1\ Connect the Pen drive with the software to the computer;



- 2\ Execute *TCA.exe* to open the software.



## START UP/SHUT DOWN



1\ Air connection;



2\ Electrical connection;



3\ USB connection;



4\ Emergency stop button:

\ Check if the Emergency Stop button is disarmed by turning it to the right;



5\ To switch ON the TCA Compact press the ON/OFF button *just once*;



6\ To switch OFF the TCA Compact press the ON/OFF button *just once*;

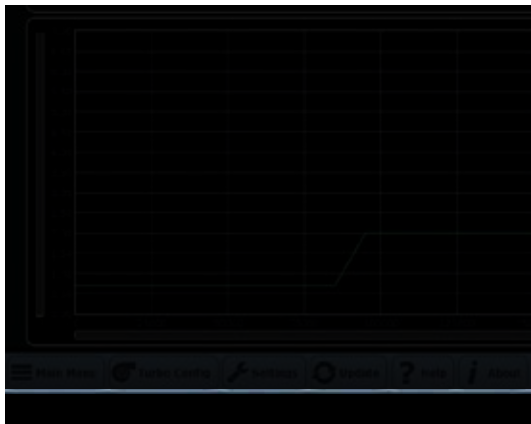


START UP/SHUT DOWN



7\ Use the USB cable to connect the TCA Compact to the computer\*.  
\* Computer not included

TOOLBAR



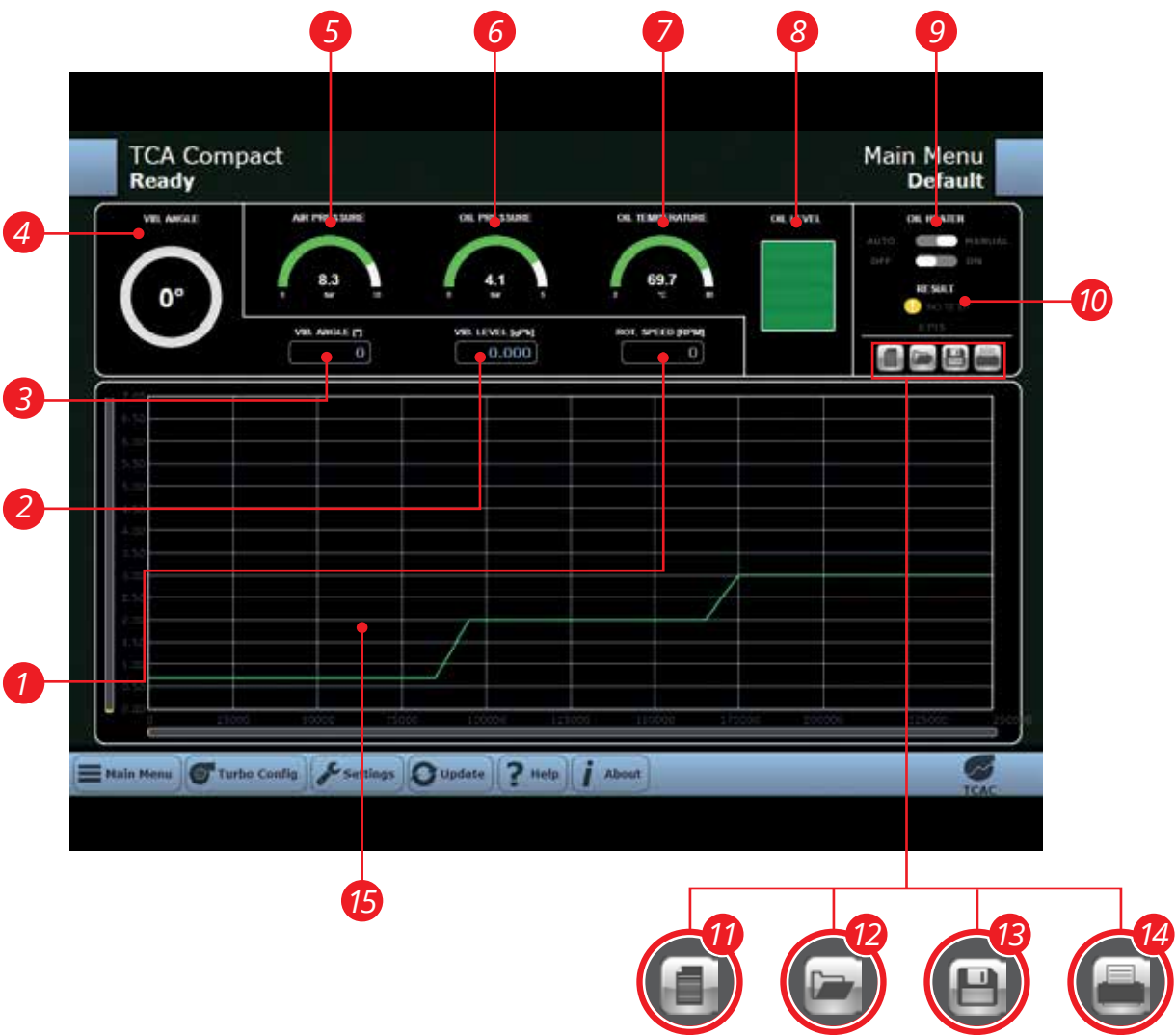
1\ Toolbar;



2\ "Main Menu":



TOOLBAR



- 1\ Rotation speed

2\ Vibration level

3\ Vibration angle

4\ Vibration angle

5\ Air pressure
- 6\ Oil pressure

7\ Oil temperature

8\ Oil level

9\ Oil heater control

10\ Test control (pass/fail)
- 11\ New test

12\ Open test

13\ Save test

14\ Print test report

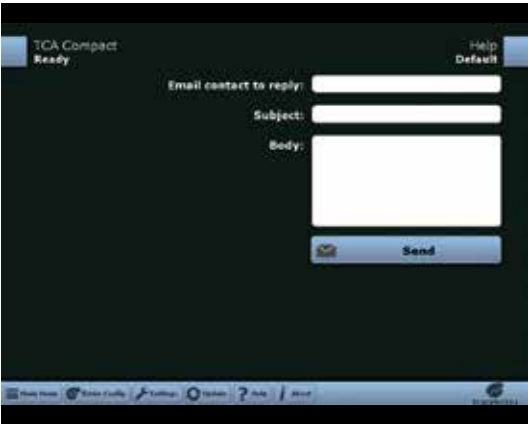
15\ Test graphic



- 3\ "Turbo Config":
- \ Set different values of maximum vibration according to the rotation;

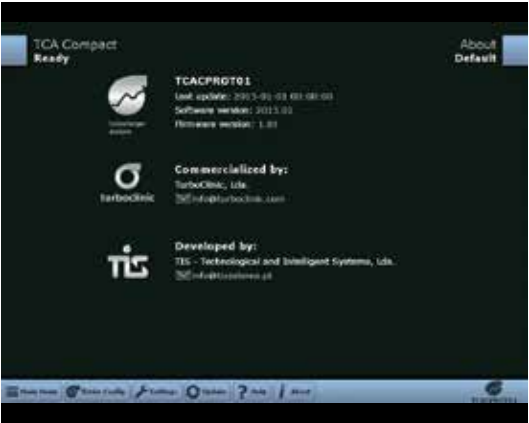


- 4\ "Settings":
- \ Select language;
- \ Set warnings;
- \ Set vibration scale;
- \ Reporting destination email;



- 5\ "Help":
- \ Send an e-mail to the support team;

TOOLBAR

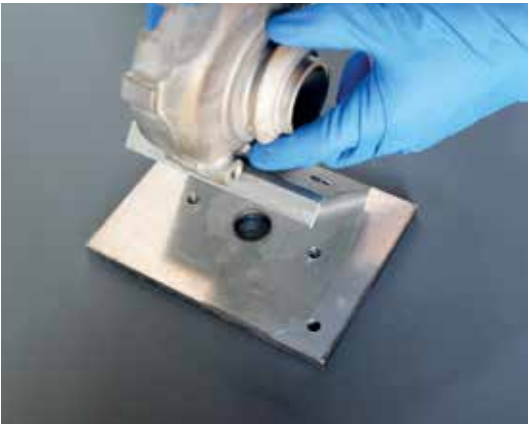


6\ “About”.

TURBO ASSEMBLY



1\ Core assembly:



1.1\ Use the Base Flange to place the turbine housing;



1.2\ Screw the turbine housing to the base flange;



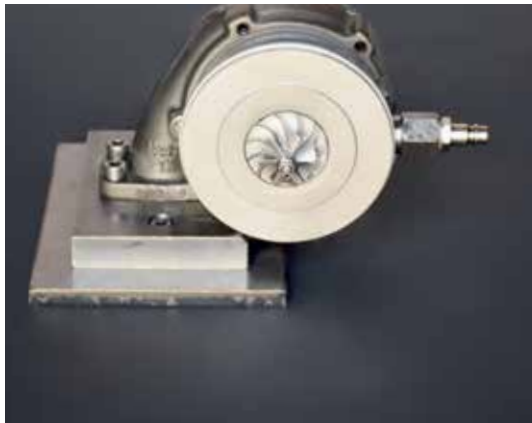
## TURBO ASSEMBLY



1.3\ Place the core in the turbine housing;



1.4\ Mount the oil inlet adapter;



1.5\ Core assembly complete.



2\ Mount the core on the TCA Compact:



2.1\ Fix the base flange to the TCA Compact's base;



2.2\ Oil return (*magnetically coupled*).

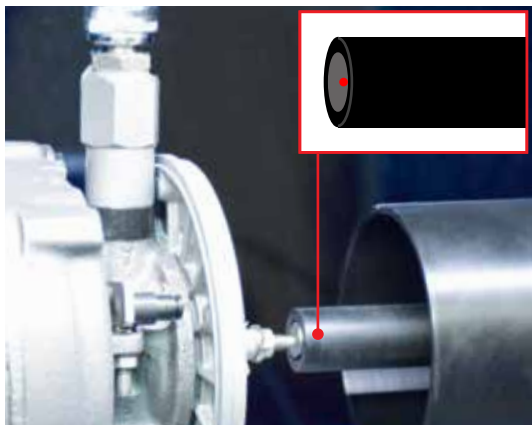
## TURBO ASSEMBLY



3\ Connect the oil supply to the core;



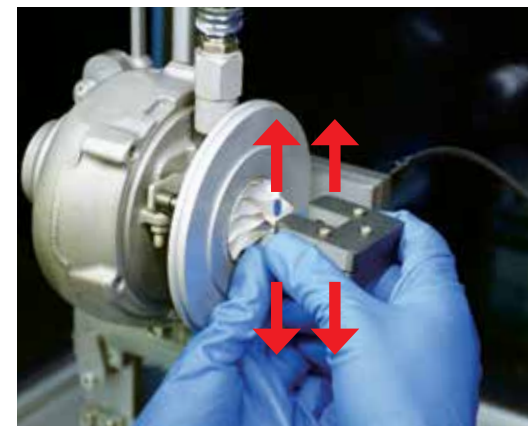
4\ Sensor emplacement:



4.1\ Point the shaft to the right of the sensor as shown in the image with a distance of 1 to 2mm between them.



5\ Mark the zero point on the compressor wheel:



5.1\ Magnetise the bolt (*move it up and down*).



6\ Place the protection cup (*when the protection cup is used it must be leaning against the core plate to prevent damaging the core and the sensor*).



TEST



1\ To perform the test:  
1.1\ Turn on the oil pump on;



1.2\ Open the air supply to make the turbo spinning.



2\ Test results:  
2.1\ Test fail;



2.3\ Correct the balance;

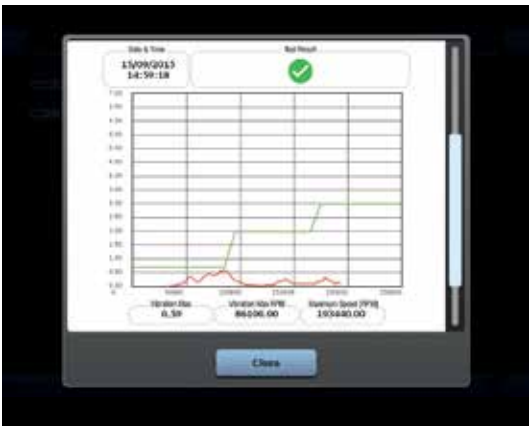


2.4\ Test ok.

REPORTS



1\ "Main menu";



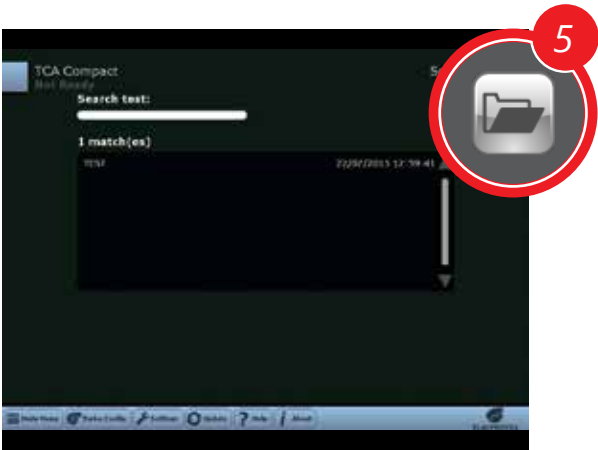
2\ "Preview report";



3\ "Print test report";



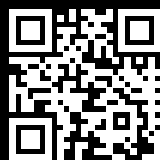
4\ "Save test";



5\ "Open test".



This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



*[www.turboclinic.com](http://www.turboclinic.com)*

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